

Notice of Allowability

Application No.

10/804,549

Examiner

Juan C. Ochoa

Applicant(s)

IH, CHE-HANG C.

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/25/07.
2. ☒ The allowed claim(s) is/are 1-24.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

1. The amendment filed 7/25/07 has been received and considered. Claims 1-24 are presented for examination.

Examiner's Amendment

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
3. Authorization for this examiner's amendment was given in a telephone interview with Jonathan Hallman on 9/21/07.
4. The application has been amended as follows:
5. Claim 11 line 1, immediately after the term "said", the following has been inserted -- one-body --.
6. Claim 12 line 1, immediately after the term "said", the following has been inserted -- one-body --.
7. Claim 13 line 2, immediately after the term "said", the following has been inserted -- one-body --.
8. Claim 15 line 7, immediately after the term "mass properties of", the following has been inserted -- a --.
9. Claim 20 line 1, the number "18" has been replaced with the number -- 19 --.

Art Unit: 2123

10. Claim 21 line 1, immediately after the term "said", the following has been inserted -- one-body --.

Allowable Subject Matter

11. Claims 1–24 are allowed over prior art of record.

12. The following is an examiner's statement of reasons for allowance:

13. While Hollars et al., SD/FAST User's Manual, discloses determining a geometric shape (see "the correct geometry ... must be supplied by the user" in page T–69, Summary section, 4th paragraph) that resembles the structure in a fully deployed configuration (see page T–60, section T3.4, lines 1–2), Michael William Sayers, Symbolic Computer Methods To Automatically Formulate Vehicle Simulation Codes, discloses the deployed structure (See "A spacecraft model with 10 degrees of freedom is described in the SD/FAST Users Manual" in page 204, 2nd paragraph, lines 1–2) describing the degree of the deployment as one body (see "five rigid bodies: a main body W and four antennas" and "hinge points for the four antennas" in page 213),

Silverstein et al. U.S. Patent 5,790,071 teaches measurement arrangements for determining the orientation and attitude of phased-array antennas mounted on moving vehicles, such as aircraft or spacecraft. (See col. 1, lines 7–11), and Li et al. U.S. Patent 6,691,033 teaches navigation and control of spacecraft, determining the inter-star-tracker misalignments of a star tracker assembly consisting of two or more star-trackers (see col. 1, lines 18–22),

Art Unit: 2123

none of these references taken either alone or in combination with the prior art of record disclose a "**one-body** geometric shape" in combination with the remaining elements and features of the claimed invention.

14. Also, there is no motivation to combine these references to meet these limitations. It is for these reasons that applicant's invention defines over the prior art of record.

15. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

16. Applicant's arguments filed 7/25/07 have been fully considered and they are persuasive.

17. Regarding the rejection under 102 and 103. Applicant's arguments have been considered, and they are persuasive.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 2123

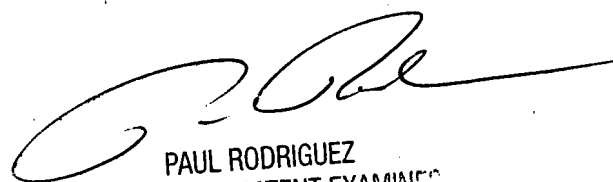
19. Examiner would like to point out that any reference to specific figures, columns and lines should not be considered limiting in any way, the entire reference is considered to provide disclosure relating to the claimed invention.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan C. Ochoa whose telephone number is (571) 272-2625. The examiner can normally be reached on 7:30AM - 4:00 PM.

21. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached on (571) 272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

22. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*** jo 9/21/07


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